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Intake Diversion Fish Passage Position Statement

<u>Position Statement:</u> The Yellowstone River Conservation District Council (YRCDC) supports and encourages the efforts of the Lower Yellowstone Irrigation Districts, the Bureau of Reclamation, the Corps of Engineers, Montana Fish Wildlife and Parks, and other partners to modify Intake Diversion to allow fish passage and protect fish from entrainment while continuing to provide irrigation water for the Lower Yellowstone Irrigation Districts.

Introduction

Fisheries and agricultural irrigation are two resource issues intertwined along the Yellowstone River. Free flowing river water is needed for either or both to occur and prosper. Where irrigation water is derived by diversion structures which block the entire river channel it can affect the viability of some fish species. Data has established that the distributions and movements of many species of Yellowstone River fishes, one of which is the federally endangered pallid sturgeon, are affected by Intake Diversion Dam,. In addition, for some unscreened diversions, significant numbers of fish can become entrained. Studies at Intake indicate that nearly half a million fish of 34 species can be entrained in Intake ditch annually.

Pallid sturgeon has been listed as endangered in the Missouri/Mississippi River systems under the Endangered Species Act. In the Yellowstone River, pallid sturgeon are presently limited to a 70 mile reach of the river below Intake Diversion structure, although they have been documented to have been present at least as far upstream as Miles City and the mouth of the Tongue River. Fish passage at Intake diversion would allow pallid sturgeon and other important warm water fish species restored access to about 235 miles of the Yellowstone River mainstem plus tributaries including the Tongue and Powder Rivers.

Background

<u>Endangered Species Act and Fish and Wildlife Service:</u> The pallid sturgeon was listed as endangered in 1990. It has been a long struggle to find a way to increase and stabilize habitat for these very large (adults can reach 70 pounds) sturgeon that utilize high flows in the main channel of the Missouri and Yellowstone for spawning. The population at issue here exists between Fort Peck Dam and Garrison (Sakakawea) Reservoir on the Missouri River and in the Yellowstone River from its confluence with the Missouri upstream to Intake Diversion. Finding a solution to fish passage at Intake is a critical step in making it possible for this population to naturally reproduce. At present there is no evidence that reproduction is occurring. The 150 or so adult fish left in the system are reaching senescence.

Fish and Wildlife Service has two areas of responsibility with regard to Intake and the fish passage efforts. First, they are the agency with the formal responsibility under the Endangered Species Act to establish the US Government position through their Biological Opinion on whether or not the project is an acceptable way of addressing pallid sturgeon habitat and survival problems. Second, in other branches of their agency they have fisheries biologists who have participated in designing the proposed modifications at Intake Diversion.

Bureau of Reclamation: The Bureau of Reclamation or "Reclamation" constructed the Intake Diversion dam and the water distribution system that comprise the Lower Yellowstone Irrigation Project as part of the nation-wide effort to establish and sustain economies in the West. The LYIP is a highly successful project providing a valuable public resource. The dam was constructed in 1905-1909.

Under the provisions of the Endangered Species Act, Reclamation is required to consult with the U.S. Fish and Wildlife Service to assure that project operations do not jeopardize the existence of pallid sturgeon. That process has resulted in the development of fish passage and protection measures. In the 17 years since the ESA listing of the pallid sturgeon, knowledge of pallid sturgeon behavior, and the options for passing fish by a structure such as Intake have both increased.

Reclamation included the U. S. Fish and Wildlife Service, Montana Fish Wildlife and Parks, Corps of Engineers, Lower Yellowstone Irrigation Districts, and the Nature Conservancy in a series of meetings and work efforts to find the most feasible solution that would accomplish three objectives: (1) attract and pass sufficient numbers of pallid sturgeon by Intake diversion that would allow spawning upstream along the Yellowstone River and its tributaries; (2) protect fish from being entrained in the canal system through the irrigation headworks at Intake diversion; and (3) provide an economically viable method of solving the passage and entrainment issues that would ensure continued irrigation through the Intake diversion.

After consideration of over 100 alternatives, Reclamation and the Corps of Engineers, with input from the other entities involved have identified that constructing a rock ramp which would span the width of the river to pass fish by Intake is likely the best option to achieve their three objectives. This structure would serve three purposes: (1) provide a sufficient quantity of water at main channel velocities to attract the fish to the passage; (2) eliminate/reduce the present turbulence to a more laminar flow so that pallid sturgeon (and other warm water fish) can navigate the rise needed for irrigation head; and (3) replace the present rock and crib diversion dam with a hardened sill at the same height to divert water into the irrigation system. In addition a screening device would be constructed adjacent to the headworks to prevent fish from entering the canal system.

Lower Yellowstone Irrigation Districts:

The districts, LYID #1 in Montana and LYID #2 in North Dakota, were established to accept the operation and maintenance and replacement duties on the original physical features of the Bureau of Reclamation's Lower Yellowstone Irrigation Project (LYIP). The districts are non-profit public corporations. It is their duty to divert water from the Yellowstone River and distribute it through a network of canals and laterals to the valley's farm units. There are about 400 miles of public waterways involved in delivering water to 56,000 irrigable acres. The districts' constituents pay annual assessments that cover all O&M&R costs. The districts are concerned about the future O, M & R of the proposed fish protection devices and will assist in selecting devices that are manageable.

The districts maintain the Project's Intake Diversion Dam. The dam is a wood crib and rock feature that spans the entire Yellowstone River except for a small side channel (natural) that flows only during the spring runoff. It creates a head of 5 feet during low flow. The districts add additional rock to the downstream side of the wooden dam each year after all snowmelt has passed. The purpose of this procedure is to maintain the water level to about 1' above the crest of the dam and to protect the dam during incidents of high flow and ice movement. The rock creates rapids and a barrier that pallid sturgeon and other native fish species cannot navigate. The districts seek a fish passage option that preserves an economically viable diversion of water for agriculture.

Corps of Engineers (COE): COE has a large scale species recovery program which was initiated because the series of federal dams and reservoirs along the Missouri River, along with river modifications to make the river navigable for barge traffic, has caused the decline of several species now listed under the Endangered Species Act including pallid sturgeon/ Because the COE has received authorization to work with Reclamation on the Yellowstone River through the passage of the Water Resources Development Act, the COE will add the expertise and resources associated with its Recovery Program and apply those resources with Reclamation on Intake and the Yellowstone River.

Montana Fish Wildlife and Parks (MFWP)
Montana Fish, Wildlife and Parks is the agency responsible for management of fish and wildlife resources within the state. MFWP has been instrumental in assessing the effects of Intake Dam on warm water fishes, including pallid sturgeon, over the past 30 years, and will be the lead agency conducting the evaluation of the fish passage structure's ability to pass pallid sturgeon and other key species within the Yellowstone River native fish assemblage once it is completed.

State of Montana, nonprofit organizations and other conservation interests: Because the Yellowstone River remains free-flowing and offers the potential of long reaches of spawning and rearing habitat, Montana and nonprofit groups such as the Nature Conservancy with an interest in pallid sturgeon survival have made the fish passage project at Intake a high priority. Other warm water fish species will also benefit from this fish passage project.

Role of the YRCDC: The governor, state government agencies, and regional citizens are looking to the YRCDC for leadership in managing the Yellowstone River. YRCDC, made up of a coalition of conservation districts, has both resource management and producers' well-being as goals. The position taken by the YRCDC is based on recent science findings from the rivers where pallid sturgeon live, and on science experiments done in a laboratory setting on warm water fish swimming abilities. This position seeks to eliminate conflict between economic and conservation interests and supports the Council's role as a grass roots supporter of wise use of resources.